

REMARKS

Claims 1-18 were pending in this application. Claims 1-3 and 5-18 have been canceled, without prejudice, subject to their inclusion in one or more continuing applications. Claim 4 has been amended and claims 19 and 20 have been added to more particularly point out and distinctly define the subject matter of the invention. Upon entry of this amendment, claims 4, 19 and 20 will be pending. No new matter has been added.

Applicants respectfully submit that the rejections of claims 1-3 and 5-18 are moot after entry of this Amendment and request the withdrawal of these rejections.

Claim 4 was rejected under 35 U.S.C. § 112, second paragraph, for indefiniteness. The Examiner pointed out that claim 4 was not properly dependent on claim 1 in that it did not incorporate all the limitations of independent claim 1. Claim 4 has been amended to independent form. Accordingly, Applicants respectfully request withdrawal of this rejection in view of this amendment.

Claim 4 was rejected under 35 U.S.C. § 103(a) as being unpatentable over US Pat. No. 6,194,203 of Blum *et al.* in view of US Pat. No. 4,767,704 of Cleveland *et al.* The Examiner contends that while Blum does not teach all of the claimed subject matter, Cleveland teaches that it is advantageous to add "many different uncommon minerals" to animal cell culture and it would have been obvious to vary proportions and amounts of the media ingredients since they are result effective variables, *i.e.*, they would be routinely optimized by one of ordinary skill in the art. Applicants respectfully disagree.

In the presently claimed invention, Applicants have formulated a chemically defined medium that supports growth of immortalized cell lines at high cell densities. Claim 4 has been amended to point this out and this amendment is supported at, *e.g.*, page 21 of the specification and the data presented in Fig. 1. Neither of the cited references contain any express teachings that would motivate the

skilled artisan to select the media components and concentration ranges presently claimed for growth of immortalized cell lines at high cell density.

Further, as evidenced by the disclosure of experimental results on pages 21 and 22 of the specification, the presently claimed media formulation provides for quick adaptation of immortalized cell lines to chemically defined media. Claim 4 has been amended to point this out. In particular, the media formulation of the invention provides for quick adaptation of Sp2/0-derived myeloma cell lines. As the Applicants state at the top of page 22, prior to the present invention, adaptation of myeloma cell lines to defined media was difficult and could take up to one year to complete. In fact, Blum *et al.* recognize this adaptation problem at col. 16, lines 45-65, and use a multi-step serum reduction protocol to address it. In contrast, the presently claimed medium allows for cell banking and direct growth of cells from frozen stocks in the chemically defined medium without any "weaning" process as described by Blum *et al.*

The Blum reference does not suggest changing the media formulation as a possible solution to the adaptation problem. In fact, neither of the cited references contain any express teachings that would motivate the skilled artisan to select the media components and concentration ranges presently claimed to provide for quick adaptation of immortalized cell lines from serum or protein-containing medium to chemically defined medium or cell banking directly in chemically defined medium. Accordingly, for all of the above reasons, withdrawal of the rejection of claim 4 under 35 U.S.C. § 103(a) is respectfully requested.

Claim 4 has also been amended to correct typographical errors including the spelling of "arginine" and providing the concentration or units of concentration for ascorbic acid, phenylalanine, sodium selenate and valine.

Lastly, Applicants point out to the Examiner that an Information Disclosure Statement was filed on 18 July 2003 in the instant application disclosing a single PCT publication, namely WO 02/101019.

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Applicants did not receive any acknowledgment of this in the last Office Action. Consideration of this publication and an initialed PTO-1449 Form are requested from the Examiner.

A Notice of Allowance is earnestly solicited in the present application. The Examiner may contact the undersigned attorney at 610.240.8465 to clarify any unresolved issues raised by this response.

Respectfully submitted,

By: 

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Enclosure: Petition for a One-Month Extension of Time